

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES



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 In re Application of:
 Peter SCHRAMM et al.

: Examiner: Thach H. Bui

For: FUEL INJECTOR

: Art Unit: 3752

Filed: July 17, 2002

Serial No.: 10/089,833
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Mail Stop Appeal Brief - Patents
 Commissioner for Patents
 P.O. Box 1450
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 Michelle Camiaux (Reg. No. 36,098)

APPEAL BRIEF TRANSMITTAL

SIR:

Transmitted herewith for filing in the above-identified patent application please find an Appeal Brief pursuant to 37 C.F.R. § 41.37.

Please charge the Appeal Brief fee of \$340.00, and any other fees that may be required in connection with this communication to the deposit account of **Kenyon & Kenyon**, deposit account number **11-0600**. A duplicate of this paper is attached for this purpose.

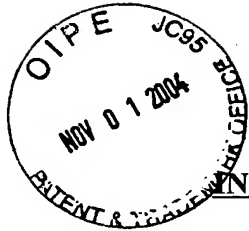
Dated: 26 OCT 2004

Respectfully submitted,

By: _____

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APPEAL BRIEF PURSUANT TO 37 C.F.R. § 41.37

SIR:

On October 4, 2004, Appellants submitted a Notice of Appeal from the final rejection of claims 7 to 12 contained in the Final Office Action issued by the U.S. Patent and Trademark Office (the "PTO") on June 2, 2004 in the above-identified patent application.

In accordance with 37 C.F.R. § 41.37, this brief is submitted in support of the appeal of the final rejection of claims 7 to 12. For at least the reasons set forth below, the final rejection of claims 7 to 12 should be reversed.

1. REAL PARTY IN INTEREST

The real party in interest in the present appeal is Robert Bosch GmbH,
Postfach 30 02 20, 70442 Stuttgart, Federal Republic of Germany. Bosch is the assignee

of the entire right, title and interest in the present application.

2. **RELATED APPEALS AND INTERFERENCES**

There are no interferences or other appeals related to the present application.

3. **STATUS OF CLAIMS**

Claims 1 to 6 have been canceled.

Claims 7 to 12 stand rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 6,561,435 ("Kluegl").

Appellants appeal from the final rejection of claims 7 to 12. A copy of all of the pending claims is attached hereto in the Appendix.

4. **STATUS OF AMENDMENTS**

Appellants filed a Response After Final Rejection on August 11, 2004.

However, the Response did not contain any amendments.

5. **SUMMARY OF THE CLAIMED SUBJECT MATTER**

The only independent claimed involved in the present Appeal is claim 7.

Claim 7 recites a fuel injector for injection of fuel into a combustion chamber of an internal combustion engine. Fig. 1 shows a partial view of an example embodiment of the fuel injector. The fuel injector may include at least one retaining flange 5 that may project radially beyond a nozzle body. *Substitute Specification*, page 2, line 18. Each retaining flange 5 may extend over only a portion of a perimeter of the fuel injector. *Id.*, page 2, lines 21 to 23. Each retaining flange 5 may include a seating surface 7 for positioning on a cylinder head of the engine, and a working surface 6 for a hold-down device. *Id.*, page 3, lines 6 to 8.

6. **GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

Whether claims 7 to 12 which stand rejected under 35 U.S.C. § 103(a) are patentable over Kluegl.

7. **ARGUMENTS**

Rejection of Claims 7 to 12 Under 35 U.S.C. § 103(a)

A. Claims 7, 8, and 10 to 12:

Claims 7, 8, and 10 to 12 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Kluegl. It is respectfully submitted that Kluegl does not render unpatentable any of claims 7, 8, and 10 to 12 for at least the following reasons.

Claim 7 recites, inter alia, the following:

... the at least one retaining flange extending over only a *portion* of a perimeter of the fuel injector.

As regards the "at least one retaining flange" of claim 7, the Examiner relies on peripheral cylindrical collar 5 shown in Fig. 1 of Kluegl, and asserts that it would have been obvious to modify the collar 5 of Kluegl so that it would extend over only a portion of a perimeter of the fuel injector shown in Fig. 1.

In rejecting a claim under 35 U.S.C. § 103(a), the Examiner bears the initial burden of presenting a *prima facie* case of obviousness. *In re Rijckaert*, 9 F.3d 1531, 1532 (Fed. Cir. 1993). To establish *prima facie* obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991). Second, there must be a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091 (Fed. Cir. 1986). The reasonable expectation of success must be found in the prior art, and must not be based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488. Third, the prior art reference(s) must teach or suggest all of the claim limitations. *In re Royka*, 490 F.2d 981 (C.C.P.A. 1974).

The Examiner has not met this burden. In particular, the Examiner has not presented a single reference that discloses or suggests a flange that extends over only a portion of a perimeter of fuel injector, and has not provided any support for the proposition that there was a reasonable expectation of success for modifying the collar 5 of Kluegl to extend over only a portion of a perimeter of a fuel injector, as the Examiner suggests.

The Examiner apparently contends that there are two reasons that it would have been obvious to modify the collar 5 of Kluegl to extend over only a portion of a perimeter of the fuel injector, rather than around the entire perimeter. The first reason alleged is "so that the entire injector is pressed axially downward into a corresponding receiving bore in the cylinder head of the internal combustion engine." However, as described in Kluegl, the clamping claw A presses axially downward from above into the

peripheral collar 5, with the result that the entire injector is pressed axially downward into a corresponding receiving bore. Col. 3, lines 12-15. Thus, the reason that the peripheral collar 5 is provided is so that the entire injector may be axially pressed down by the clamping jaw. This does not provide any motivation for modifying the collar 5 to extend over only a portion of the perimeter. That is, it does not appear that modifying the collar 5 so that it extends over only a portion of the perimeter would provide any benefit with respect to pressing down the injector.

The second reason propounded by the Examiner is "to reduce the manufacturing cost of the fuel injector." However, as shown in Fig. 1, the cylindrical collar is formed in one piece (is integral with) the injector housing 2. There is no suggestion in Kluegl that modifying the collar 5 to extend over only a portion of the perimeter would, in fact, reduce manufacturing costs. Indeed, it appears that it would either be the same cost or more (due to the more complicated design), to manufacture the fuel injector. In any event, there is no suggestion in Kluegl that this modification would reduce manufacturing costs.

Furthermore, a prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984). Kluegl states that a copper disk B is arranged between a lower end face of the injector and a bottom face of a receiving bore that receives the collar 5, in order to seal the receiving bore. Col. 3, lines 17 to 19. As illustrated in Fig. 1, the lower end face of the injector is a lower end face of the collar 5. Thus, the collar 5 of Kluegl is apparently used to secure a seal that seals a receiving bore. This tends to suggest that the collar 5 should extend over the entire perimeter of the fuel injector in order to adequately apply pressure to the disk B in order to seal the entire perimeter of the fuel injector within the receiving bore. Thus, Kluegl teaches away from the claimed invention.

Furthermore, if the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there would be no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900 (Fed. Cir. 1984). As indicated above, it is possible that the disk B of Kluegl would be rendered unsatisfactory for its intended purpose if the collar 5 of Kluegl were to be modified to cover only a portion of a perimeter of the fuel injector. Thus, there is no suggestion or motivation to make the proposed modification. It is therefore respectfully

submitted that Kluegl does not render unpatentable claim 7.

Claims 8, and 10 to 12 ultimately depend from and therefore include all of the limitations of claim 7. It is therefore respectfully submitted that Kluegl does not render unpatentable these dependent claims for at least the same reasons set forth above in support of the patentability of claim 7. *In re Fine, Supra* (any dependent claim that depends from a non-obvious independent claim is non-obvious).

In view of the foregoing, it is respectfully submitted that Kluegl does not render unpatentable any of claims 7, 8, and 10 to 12 of the present application. Reversal of the Examiner's rejection of claims 7, 8, and 10 to 12 under 35 U.S.C. § 103(a) is, therefore, requested.

Claim 9:

Claim 9 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Kluegl. It is respectfully submitted that Kluegl does not render unpatentable claim 9 for at least the following reasons.

As an initial matter, claim 9 ultimately depends from and therefore includes all of the limitations of claim 7. It is therefore respectfully submitted that Kluegl does not render unpatentable this dependent claim for at least the same reasons set forth above in support of the patentability of claim 7.

Moreover, claim 9 recites, inter alia, the following:

... each of the retaining flanges is made as a separate component and is joined to the nozzle body in one of an integral and a friction-locking manner.

As regards the "at least one retaining flange" of claim 7, the Examiner relies on peripheral cylindrical collar 5 shown in Fig. 1 of Kluegl, and asserts that it would have been obvious to modify the collar 5 of Kluegl so that it would extend over only a portion of a perimeter of the fuel injector shown in Fig. 1.

The Examiner has not met the burden of presenting a *prima facie* case of obviousness. In particular, the Examiner has not presented a single reference that discloses or suggests retaining flanges made *as separate components* joined to a nozzle body. Nowhere does Kluegl indicate that the peripheral collar 5 of Kluegl is made of one or more separate components that are joined, e.g., to the injector housing 2. Accordingly, the Examiner has failed to establish a *prima facie* case of obviousness with respect to claim 9.

In view of the foregoing, it is respectfully submitted that Kluegl does not render unpatentable claim 9 of the present application. Reversal of the Examiner's rejection of claim 9 under 35 U.S.C. § 103(a) is, therefore, requested.

8. **CONCLUSION**

For at least the reasons indicated above, Appellants respectfully submit that the art of record does not teach or suggest Appellants' invention as recited in the claims of the above-identified application. Accordingly, it is respectfully submitted that the invention recited in the claims of the present application is new, non-obvious and useful. Reversal of the Examiner's rejections of the claims is therefore respectfully requested.

Respectfully submitted,

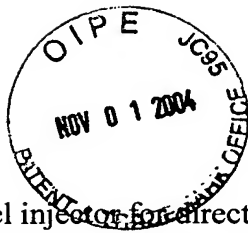
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Dated: 26 05 2001

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APPENDIX

7. A fuel injector for direct injection of fuel into a combustion chamber of an internal combustion engine, the fuel injector comprising:

a nozzle body; and

at least one retaining flange situated on the nozzle body and projecting radially beyond the nozzle body, the at least one retaining flange having a working surface for a hold-down device and a seating surface for positioning on a cylinder head of the engine, the at least one retaining flange extending over only a portion of a perimeter of the fuel injector.

8. The fuel injector according to claim 7, wherein the at least one retaining flange includes two retaining flanges situated opposite one another.

9. The fuel injector according to claim 8, wherein each of the retaining flanges is made as a separate component and is joined to the nozzle body in one of an integral and a friction-locking manner.

10. The fuel injector according to claim 9, wherein each of the retaining flanges is welded to the nozzle body.

11. The fuel injector according to claim 8, wherein each of the retaining flanges is made in one piece with the nozzle body.

12. The fuel injector according to claim 8, wherein each of the retaining flanges covers an angular range of about 45° in a peripheral direction.